

**WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION**



**WV Institutional Controls Focus Group Interim Report**

Interim Recommendations for Establishing a Comprehensive  
State Voluntary Land Stewardship Program

September 9, 2010

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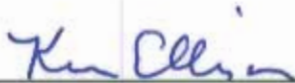
### Acknowledgements

The West Virginia Department of Environmental Protection wishes to recognize the representatives from the United States Environmental Protection Agency Region 3 (USEPA Region 3), the West Virginia (WV) Chamber of Commerce, the WV Coal Association, the WV Manufacturers Association, Marshall University, ARCADIS U.S., Inc. as well as the business site owners who provided valuable perspectives in the development of the recommendations for a voluntary land stewardship program outlined in this report.

The Focus Group was charged with evaluating best practices of existing federal and state institutional and engineering control programs implemented or proposed throughout the country and making recommendations from that perspective for developing a comprehensive voluntary land stewardship program for the state. See Appendix A – *Charge to the Institutional Controls (IC) Focus Group*. There are a number of existing stewardship approaches and our goal is to create a voluntary land stewardship program that uses best practices to increase the protectiveness of risk-based cleanups while facilitating redevelopment.

Our objective is to create a voluntary land stewardship program that will encourage business to return unused facilities to active operation or encourage new businesses and developers to productively reuse these sites. We want to build on the progress made to date in our state with our environmental remediation programs, and want to create a predictable and appropriate oversight program — with easy-to-use tools that help streamline the negotiation of environmental concerns in property transactions.

Through a consensus-based approach, the Focus Group has developed a series of concrete and action-oriented recommendations that are being implemented on an interim basis and tested through a pilot study as further described in this report. We appreciate each member's efforts and look forward to continued work with the Focus Group during the pilot study and finalization of its recommendations.

  
Randy Huffman, Secretary  
Ken Ellison, Director,  
Division of Land Restoration

### **WV IC Focus Group Members**

The IC Focus Group participants include:

James W. Bodamer, FMC Corporation  
M. Ann Bradley, WV Chamber of Commerce  
Marguerite J. Carpenter, FMC Corporation  
Jerome E. Cibrik, The Dow Chemical Company  
Jessica Greathouse, USEPA Region 3  
Robert E. Lannan, WV Manufacturers Association  
Greg Tieman, WV Coal Association

The IC Working Group participants include:

Teresa Buckland, Center for Environmental, Geotechnical and Applied Sciences  
(CEGAS), Marshall University  
Denise K. Chamberlain, ARCADIS U.S., Inc.  
George Carico, CEGAS, Marshall University  
Dr. Calvin A. Kent, Center for Business & Economic Research (CBER), Marshall  
University  
Christine Risch, CBER, Marshall University  
Randy Rutledge, CEGAS, Marshall University  
Dr. Tony Szwilski, CEGAS, Marshall University

## List of Acronyms

“CA”	Corrective Action
“CERCLA”	Comprehensive Environmental Response, Compensation, and Liability Act
“EC”	engineering controls
“GIS”	Geographic Information System
“HRS”	Hazardous Ranking System
“HWMA”	WV Hazardous Waste Management Act
“IC”	institutional controls
“ICTS”	Institutional Controls Tracking System
“IEC”	institutional and engineering controls
“IECIP”	Institutional and Engineering Control Implementation Plan
“IEC Site”	Remediated site with IECs
“IRS”	U.S. Internal Revenue Service
“LCAP”	Landfill Closure Assistance Program
“LUST”	Leaking Underground Storage Tank
“NJDEP”	New Jersey Department of Environmental Protection
“NPL”	CERCLA National Priorities List
“O&M”	operation and maintenance
“OMM”	operation, maintenance, and monitoring
“POTW”	Publicly owned treatment works
“PRP”	CERCLA Potentially Responsible Party
“RCRA”	Resource Conservation and Recovery Act
“RP”	Remediation Party
“SARA”	Superfund Amendments and Reauthorization Act
“SMCRA”	Surface Mining Control and Reclamation Act
“UECA”	Uniform Environmental Covenants Act
“USEPA”	United States Environmental Protection Agency
“UST”	underground storage tank
“USTA”	WV Underground Storage Tank Act
“VCP”	Voluntary Cleanup Program
“VLSP”	Voluntary Land Stewardship Program
“VRP”	Voluntary Remediation Program
“VRRRA”	Voluntary Remediation and Redevelopment Act
“WV”	West Virginia
“WVDEP”	West Virginia Department of Environmental Protection
“WVDC”	West Virginia Department of Commerce

## **Structure of the Report**

This report discusses the interim recommendations of the IC Focus Group for a voluntary land stewardship program. **Section 1 Executive Summary and Interim Recommendations** briefly introduces the background concepts and the need for a comprehensive program. Section 1 includes the benefits of the program for a number of stakeholders and the program objectives.

**Section 2 Survey of States' Institutional and Engineering Control Mechanisms and Land Stewardship Programs** describes the evolving federal and state efforts to develop land stewardship programs. It includes a survey of states' approaches and a review of twelve (12) common components of a land stewardship program with examples of best practices.

**Section 3 Interim Recommendations for West Virginia's Voluntary Land Stewardship Program** includes a general description of the program, including the anticipated scope of services, enrollment process, overview of anticipated agreements, notices and reports among stakeholders, and recommended form of entity for its incorporation.

**Section 4 Pilot Study Implementation** includes a description of the selected pilot sites and services and the anticipated steps to implement the pilot study. It includes a description of the process evaluation that will be conducted after pilot study implementation that will lead to final recommendations for the program.

## **Section 1 Executive Summary and Interim Recommendations**

### Section 1.1 Introduction

In February 2009, the West Virginia Department of Environmental Protection (WVDEP) established the WV Institutional Controls Focus Group (IC Focus Group) to provide an independent perspective to the WVDEP about the feasibility of utilizing a public–private land stewardship program for the long-term safeguarding of remediated sites using institutional controls (ICs)<sup>1</sup> and engineering controls (ECs)<sup>2</sup> (collectively, IECs) to ensure that the remedy remains protective of human health and the environment. This government and business partnership effort was created to bring together critical academic, environmental, technical, financial, and legal expertise. These resources are necessary to facilitate and develop elements of a public–private partnership to structure a long-term voluntary land stewardship program. The primary outcomes of this effort will be interim recommendations and pre-implementation activities concerning the structure and operation of the voluntary land stewardship program. The IC Focus Group has developed organizational components; site acceptance criteria

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<sup>1</sup> ICs are administrative and legal controls that do not involve construction or physically changing the site and are generally divided into four (4) categories: 1) Government controls, 2) Proprietary controls, 3) Enforcement tools and 4) Informational devices. ICs are non-engineering measures that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy by limiting land or resource use. ICs are typically used when waste is left onsite and the site cannot safely support unlimited use and unrestricted exposure, and/or when cleanup equipment remains onsite. ICs are designed to reduce the possibility that people will come in contact with contamination as well as to protect cleanup equipment from damage. General information on ICs can be found in USEPA, February 2005, *Institutional Controls: A Citizen's Guide to Understanding Institutional Controls at Superfund, Brownfields, Federal Facilities, Underground Storage Tank, and Resource Conservation and Recovery Act Cleanups*, Office of Solid Waste and Emergency Response, OSWER 9355.0-98/EPA- 540-R-04-003. Examples of ICs, which are administrative and/or legal controls, include but are not limited to, environmental covenants, deed land use restrictions, water withdrawal prohibitions and continuing right of entry easements.

<sup>2</sup> ECs are physical controls or measures designed to eliminate the potential for human exposure to contamination by limiting direct contact with contaminated areas, or controlling contaminants from migrating through environmental media into soil, groundwater or off-site. Examples of ECs include capping, containment, slurry walls, extraction wells and other continuing treatment methods.



and procedures; as well as inspection, monitoring, reporting and notice standards as outlined in Section 3. A pilot study, recommended by the IC Focus Group, will be conducted to demonstrate the effectiveness, strengthen and refine the proposed program based upon the results of the pilot. Further, the IC Focus Group will conduct financial analysis during the pilot study to ensure that the program has the necessary safeguards and standards needed for a permanent solution.

The state of West Virginia (WV) is interested in taking a leadership role in maintaining the long-term protectiveness of risk-based remediation sites using IECs. IECs are an important component in the risk-based remediation process under federal and state remediation programs, including brownfield or voluntary cleanup programs (VCPs)<sup>3</sup>, and are relied upon to assure that remedies adopted remain protective of human health and the environment. Under these remediation programs, former industrial or commercial sites are remediated to a cleanup level that is protective of human health and the environment, in reliance upon the future use of the properties. These risk-based cleanups, under federal and state environmental programs, often require the creation, implementation, monitoring and maintenance of IECs because contaminants are left in place above residential standards. In order to maintain the viability of risk-based cleanups, continuing oversight and maintenance is needed. WV has several mechanisms in place to protect cleanup remedies that use IECs under the Voluntary Remediation and Redevelopment Act (VRRA)<sup>4</sup> and the WV Uniform Environmental Covenants Act (UECA), as described further in Section 2.1.<sup>5</sup> However, a more comprehensive oversight framework is needed to maintain the long-term protectiveness of these remedies as well as expand the safeguards to the full spectrum of sites cleaned up under any federal or state risk-based remediation program. For sites to remain protective, monitoring and maintenance must be conducted by the

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<sup>3</sup> For example, the State of West Virginia's VCP, known as the Voluntary Remediation Program (VRP) was established under the authority of the Voluntary Remediation and Redevelopment Act (WV Code §§ 22-22-1 et seq.) The administrative program is set out in State Rule 60 C.S.R. 3, which became effective on July 1, 1997.

<sup>4</sup> See footnote 3.

<sup>5</sup> The WV UECA (WV Code §§ 22-22b-1 et seq.) was developed to allow the long-term enforcement of IECs through the use of a statutorily-defined agreement known as an "environmental covenant."

remediation party; potentially responsible party;<sup>6</sup> the current landowner; or federal, state or local governmental agency. In addition, the IECs' existence, requirements, purpose and maintenance requirements must be effectively communicated to interested stakeholders.

Under the IC Focus Group's interim recommendations contained in this Report, remediation parties, potentially responsible parties and land owners can, at their option, pay for a number of land stewardship services, including: tracking, inspecting, protecting, providing operation and maintenance (O&M) and monitoring (collectively O&M and monitoring, OMM) services for sites with IECs. These services will be performed by a nonprofit entity created under the proposed program.

## Section 1.2 Background

Over the past 20 years, ICs and ECs have become key components of the risk-based remediation process under federal and state environmental remediation programs and these risk-based tools are relied upon to assure environmental remedies remain protective of human health and the environment. Cleanups with ECs commonly involve ongoing evaluations and technical reviews, site inspections, OMM and periodic repairs and replacement of remedy components. Federal and/or state regulatory requirements and site-specific conditions are the basis for determining whether IECs are suitably protective at a site.

Risk-based remediation encourages redevelopment at formerly used properties by providing an environmentally safe means of allowing a site to be remediated for its intended reuse. Establishing cleanup standards based on current or future intended use generally make it possible to redevelop sites that otherwise may not be remediated to unrestricted use standards due to cost or technical impracticability. When sites are not remediated to unrestricted use standards, IECs are put into place to ensure that the

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<sup>6</sup> The term "remediation party" as used in this report means any entity that is conducting the environmental assessment and remediation of a site. The term "potentially responsible party" means an entity that is legally liable for investigation and remediation of environmental contamination under the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§ 9601 et seq. (also known as the "Superfund" statute).

site remedy remains protective of human health and the environment on an ongoing basis. After remediation, IECs can also be used to restrict specific activity as a protective measure, such as restricting the use of onsite groundwater for drinking water purposes.

A fundamental premise of federal and state remediation programs is that IECs will not be compromised and thus environmental regulators and remediating parties who use IECs as part of the overall remediation plan rely upon their effectiveness to successfully protect human health and the environment over the long term. Various parties have an interest in the maintenance of IECs, such as landowners; parties responsible for conducting and maintaining the cleanup; as well as federal, state or local government entities. However, in order to sustain the appropriate level of protection for hundreds of sites with IECs, a consistent, focused effort must address their purpose, implementation, maintenance, and oversight requirements. Clearly defined roles and responsibilities plus the ability to fulfill such responsibilities are crucial to ensuring their protectiveness.

### Section 1.3 Need for a Comprehensive Program

In WV, there are a number of sites that are using IECs as part of the remedy as of the date of this Report. The universe of sites includes those with IECs remediated or closed under a federal or state environmental program, including brownfields, underground storage tanks (USTs), closed landfills, open dumps, hazardous waste sites, and former mining sites with ongoing water treatment as part of mine reclamation efforts (collectively, IEC Sites). See Appendix C – *Universe of WV Sites from Federal and State Remediation Programs*, for more information.

With the mounting number of IECs at hundreds of sites, there is a growing need for safeguarding these sites and having a centralized source of current information readily available to the public. Without one central source for all IEC information that is easily accessible, there may be an increase in the number of IEC breaches. Without a comprehensive program providing information and oversight, there is a greater likelihood that someone may excavate soil or install a drinking water well, which could potentially result in contact with, or release of, contamination, damage to remedy components or a violation of health-based land or water use restrictions. The solution is a proactive voluntary land stewardship program that helps to prevent these problems from occurring, thereby protecting the public and the environment from potential exposure to contamination and safeguarding the integrity of the remedy components.

With the mounting number of IECs at hundreds of sites, there is a growing need for safeguarding these sites and having a centralized source of current information readily available to the public.

Federal and state environmental regulators are employing a variety of land stewardship methods to ensure the continued effectiveness of remedies, but generally these methods were developed and are being applied on an *ad hoc* basis. These methods include: 1) identifying and tracking sites with IECs in remediation decision documents and site administrative records; 2) creating an environmental registry—a list of IEC Sites as an agency document or spreadsheet or as an Internet tool available to the public; 3) implementing an inspection program with regular or random agency or third-party site inspections; 4) adopting laws at the state level to assure that ICs, in the form of environmental covenants, are enforceable deed covenants that apply to future property owners' or tenants' property interests; and 5) integrating IECs at the state level into "One-Call" Systems<sup>7</sup> to provide information prior to anyone planning to excavate on a site with IECs. Although these efforts are underway, most land stewardship initiatives are applied only to federal Superfund,<sup>8</sup> RCRA Corrective Action<sup>9</sup> sites or state voluntary remediation sites. Other risk-based remediation programs may not have sufficient oversight protections. There is no centralized, comprehensive, uniform and reliable source of oversight, monitoring and information about IECs applying to the entire spectrum of federal and state risk-based cleanup sites.

Another major reason for this program is to encourage and assist in returning formerly used industrial or commercial properties to productive use. To this end, the public

There is no centralized, comprehensive, uniform and reliable source of oversight, monitoring and information about IECs applying to the entire spectrum of federal and state risk-based cleanup sites.

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<sup>7</sup> One-Call Systems consist of a national network of service providers who exchange information between underground utilities or pipeline facilities and individuals or entities planning to dig or excavate on a site. One-Call Systems are referred to as "One-Call," "Dig Safe," "Call Before You Dig," or "Miss Utility." WV refers to the system as "Miss Utility." People contact the One-Call Systems prior to excavating so that underground facilities, such as underground utilities, can be identified near the excavation area. Generally the facility owner has 48 to 72 hours to locate and identify the physical locations with color-coded spray paint and flag markers.

<sup>8</sup> Congress passed the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 (42 U.S.C. §§ 9601 et seq.) which established the Superfund program to remediate the most seriously contaminated sites nationally.

<sup>9</sup> The Resource Conservation and Recovery Act (RCRA) Corrective Action program was established when Congress amended the RCRA program (42 U.S.C. §§ 6901 et seq.) via the Hazardous and Solid Waste Amendments of 1984 (Public Law 98-616) to add a remediation component to clean up contamination at facilities that treat, store or dispose of hazardous waste.

should have easier access to site information concerning former uses, any remediation performed and other information that will allow purchasers to buy and reuse these sites.

Agency environmental remediation records and state real estate records frequently do not overlap,<sup>10</sup> with the exception of the UECA environmental covenants. However, maintaining long-term IEC information can be difficult because records can be lost or destroyed over time, agency personnel are reassigned or retire, and new owners and tenants may not know about IECs at their site. Moreover, real estate developers, property owners, local government and the general public often are unaware that a parcel has IECs. These parties can be unfamiliar with the specifics of environmental remediation programs and environmental registries, and may enter into property transactions without conducting the sufficient due diligence about a site's environmental history. Likewise, environmental regulators have no statutory or regulatory specific responsibilities for private party real estate transactions.

Environmental agencies are operating with more limited budgets and personnel, and staff members are focused on significant caseloads of active remediation projects rather than oversight of completed remediation projects. A comprehensive voluntary land stewardship program could increase the supervision and substantially enhance federal and state regulators' oversight of sites where remediation has been completed, and thus strengthen and supplement the regulatory agencies' ability to assure themselves, the state and the public that these remedies remain protective.

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<sup>10</sup> The WV Hazardous Waste Management Act (HWMA), W.Va. Code §§ 22-18-1 et seq. (1981), implemented by 33 C.S.R. 20, requires a seller or lessor of a site to disclose in the conveyance document or lease the fact that the site or its subsurface was used for the storage, treatment or disposal of hazardous waste during the seller's tenure or during a previous tenure if the seller has actual knowledge of such use. WVDEP regulations interpreting this Act include any site that was used as a permitted hazardous waste treatment, storage or disposal facility. The HWMA requirements are supplemented by WVDEP regulations which require the submission to both the County Commission and the Chief of the Office of Waste Management of a survey plot showing specific locations of waste disposal and the type, location and quantity of hazardous waste disposed therein. In addition, the Underground Storage Tank Act (UST), W. Va. Code §§ 22-17-1 et seq. (1988), implemented by 33 C.S.R. 30, requires the seller of a site, who actively used the UST or had actual knowledge of the UST's existence, to disclose in the conveyance document or lease the fact that the site contains a UST.

Because of these needs, USEPA and many states have identified the long term stewardship issues surrounding IECs as a top environmental priority. Federal and state environmental regulators are evaluating the various tools and systems that may be used to assist stakeholders in the development of new systems or to enhance current systems to effectively manage IECs.<sup>11</sup> The types of systems being evaluated include systems for tracking IEC Sites, notification regarding activities at IEC Sites, public outreach and education, and implementation planning tools/model documents.

#### Section 1.4 Program Objectives and Benefits

The objective for creating the voluntary land stewardship program is to have a comprehensive oversight framework that protects IEC remedies and provides the public with a dedicated entity whose mission is to furnish IEC information, inspection, monitoring and other remedy protection and OMM services. This comprehensive approach will protect human health and the environment and further facilitate the reuse and redevelopment of formerly used commercial, industrial, or mining sites. Also, it will provide the public with easy access to site and environmental information, for reassurance that the remedies at these sites will remain protective, thereby facilitating further economic development and reuse opportunities.

When the proposed voluntary land stewardship program is implemented, remediation parties and site owners of IEC Sites will have the option, for a fee, to participate in this program. Potentially responsible parties will not be transferring their environmental liabilities, but will have an effective risk-management mechanism to keep IEC Sites protected.

The program will increase the supervision and substantially enhance federal and state regulators' oversight of these sites, and thus strengthen and supplement the regulatory agencies' ability to assure themselves, the state and the public that these remedies remain protective. This program, proposed to be created with a viable nonprofit entity whose primary mission is to ensure the long-term effectiveness of IECs at IEC Sites, would provide many important benefits to potentially responsible parties, the general public, landowners, USEPA, WVDEP, WV Department of Commerce (WVDC), and the WV Legislature, as detailed in the following table, Figure 1:

When the proposed voluntary land stewardship program is implemented, remediation parties and site owners of IEC Sites will have the option, for a fee, to participate in this program. Potentially responsible parties will not be transferring their environmental liabilities, but will have an effective risk-management mechanism to keep IEC Sites protected.

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<sup>11</sup> *An Overview of Land Use Control Management Systems*, Interstate Technology and Regulatory Council (December 2008) p.4.

Figure 1: Voluntary Land Stewardship Program Benefits

Benefit Category	Benefit Description	Remediation Parties	General Public	Land Owners	USEPA	WVDEP	WVDC	Legislature
Protection	Protects as a risk-management tool against long-term liability exposure from the failure of IECs	√	√	√	√	√	√	√
Protection	Provides additional safeguards and oversight to ensure short- and long-term protection of human health and the environment	√	√	√	√	√	√	√
Protection	Reduces risk of regulatory reopeners for remedy breaches	√	√	√	√	√	√	√
Protection	Reduces uncertainty regarding the future use of IEC Sites	√	√	√	√	√	√	√
Financial Assurance	Participating in program and paying for services can provide evidence of financial assurance for any continuing obligations	√		√	√	√		
Cost Savings	Protects cost-savings associated with risk-based cleanups	√						

Benefit Category	Benefit Description	Remediation Parties	General Public	Land Owners	USEPA	WVDEP	WVDC	Legislature
Cost Savings	Reduces associated programmatic costs by obtaining oversight with non-profit entity	√		√				
Cost Savings	Avoids increased spending for agency resources, including costs for additional staff needed to perform this work	√	√	√	√	√	√	√
Lessening Burdens of Government	Allows regulators to focus their resources on higher environmental priorities or pressing issues, such as oversight, enforcement, and approvals for ongoing active remediation at sites	√	√		√	√		√
Lessening Burdens of Government	Allows regulators, who are responsible for abandoned sites, to focus on capital construction projects instead of ongoing water treatment at Special Reclamation sites and OMM at LCAP sites				√	√		√
Lessening Burdens of Government	Mitigates loss of institutional memory as agency personnel retire or are replaced because information and data will be collected and maintained at a central source	√	√	√	√	√	√	√
Lessening Burdens of Government	Allows the State to meet its own increasing obligations for Special Reclamation sites, LCAP sites, and Superfund OMM responsibilities	√	√	√	√	√	√	√



Benefit Category	Benefit Description	Remediation Parties	General Public	Land Owners	USEPA	WVDEP	WVDC	Legislature
Property Transfer	Eases transfer of IEC Sites when oversight and OMM services are being conducted by the nonprofit entity	√	√	√	√	√	√	√
Property Transfer	Eases negotiation for sales price and transfer when real estate conveyance includes a subscription to program services for a period of time at a specified cost	√	√	√	√	√	√	√
Property Transfer	Facilitates an organized and effective method for the State to take title to IEC Sites where economic development interests will be served since oversight and OMM services will be handled by the nonprofit entity during the “title holding” period	√	√	√	√	√	√	√
Property Transfer	Helps avoid inappropriate property use if a new property owner or tenant is not aware of the IECs associated with the site and acts contrary to the IEC requirements	√	√	√	√	√	√	√
Property Transfer	Ensures IECs remain in place and provides notification to new owners and tenants about the requirements during property transfers	√	√	√	√	√	√	√

Benefit Category	Benefit Description	Remediation Parties	General Public	Land Owners	USEPA	WVDEP	WVDC	Legislature
Property Transfer	Assists with meeting “All Appropriate Inquiry” as required under sections 101(35)(B)(ii) and (iii) of CERCLA by having the consistent availability of site remediation records during property conveyance negotiations			√			√	
Property Transfer	Links environmental records to State, county and local land records for IEC Sites participating in the program	√	√	√	√	√	√	√
Public Information	Eases public access to information by consolidating all federal and State IEC Site records into a single electronic data registry	√	√	√	√	√	√	√
Economic Development	Increases availability of commercial or industrial sites for economic development or job creation when IEC Sites have a current subscription for program services and are “ready for reuse”	√	√	√			√	√
Economic Development	Increases opportunities for new businesses and job creation when real estate conveyances involving IEC Sites include a subscription of program services for a period of time	√	√	√			√	√

## Section 1.5 Interim Recommendations

The IC Focus Group: 1) identified land stewardship best practices that facilitate property transfer and reuse of remediated sites while ensuring risk-based cleanups remain protective of human health and the environment, 2) responded to suggested methods discussed in the Report to strengthen the protection of IEC Sites within the state, and 3) provided feedback concerning the feasibility/framework for a voluntary land stewardship program to oversee, monitor, inspect and protect IEC Sites. Based upon this work, the IC Focus Group made the following interim recommendations that are explained in greater detail in Sections 3 and 4 of the report:

1. Create a nonprofit entity with a mission to provide a centralized, comprehensive, uniform and reliable source of oversight, monitoring and information about IEC Sites,
2. Seek approval from the Internal Revenue Service to operate under the 501(c)(3) nonprofit status,
3. Set up a voluntary program to offer the services described in Section 3.1 and developed using the best practices outlined in Section 2.2,
4. Continue to test CostPro software<sup>12</sup>, designed to assist in estimating closure and post-closure OMM costs, and other costing methods to develop a baseline cost-estimating approach to determine program service fees,
5. Implement a pilot study to test and refine the program as described in Section 4,

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<sup>12</sup> USEPA developed a methodology to evaluate RCRA closure and post-closure cost estimates for hazardous waste treatment, storage or disposal facilities. *Cost Estimates for Closure and Post-Closure Care Plans* (EPA/530-SW-87-009). The CostPro software was developed by the RS Means Company, one of the primary sources of cost information, to assist USEPA and states in estimating these costs, and a new edition was issued in 2009.

6. Develop a web-based, public-accessible, environmental registry that consists of material site remediation documentation and records about site inspections and other pertinent information,
7. Pursue funding from a variety of sources to develop the environmental registry and link the environmental registry to real property records to better manage, share and coordinate IEC Site information with other interested parties, and
8. Based upon the results of the above interim recommendations, develop final recommendations at the conclusion of the pilot study.

## **Section 2 Survey of States' Institutional and Engineering Control Mechanisms and Land Stewardship Programs**

### **Section 2.1 Building a Comprehensive Program Based upon West Virginia's Environmental Programs**

West Virginia has developed some methods to address and share information about IEC Sites. State statutes governing hazardous waste management and USTA require deed and lease notifications. In 2005, the state enacted the UECA which established the legal instrument, that is, an environmental covenant, to create and enforce IECs under state property law.<sup>13</sup> In 2006, the state amended the WV Underground Facility Damage Prevention Act<sup>14</sup> so that the state's One-Call System, called "Miss Utility," would include information about sites with IECs. In addition, the WVDEP maintains website information about voluntary cleanup sites with IECs, and participated in a pilot effort in 2004 with USEPA to develop an IEC database: USEPA's Institutional Controls Tracking System (ICTS).<sup>15</sup>

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<sup>13</sup> A model form of an environmental restrictive covenant for use under the WV UECA can be found on the WV DEP's website for the VRP: <http://www.dep.wv.gov/dlr/oer/voluntarymain/Pages/default.aspx>.

<sup>14</sup> WV Code §§ 24C-1-1 et seq., effective July 15, 1996 and amended June 10, 2006.

<sup>15</sup> The WVDEP website information about voluntary cleanup sites with IECs is available at: IECs at <http://gis.wvdep.org/kml/>. USEPA's ICTS is a database of IC information for all completed Superfund sites that provides information to USEPA staff about: 1) any residual contamination by media, 2) any required IC

## Section 2.2 Using Best Practices

The WVDEP wants to build upon these proactive state efforts and create a voluntary comprehensive and uniform program using best practices based upon federal and state land stewardship programs and initiatives. The IC Focus Group conducted a survey of best practices which is summarized in Appendix B – *A Survey of States’ Institutional Controls & Engineering Controls/Land Stewardship Programs Dated 4/1/09*.

Based upon this survey, the IC Focus Group determined that managing oversight of sites with IECs is evolving nationwide and while it is a high priority among states to develop land stewardship programs, approaches are varied. Most states are focusing primarily on brownfields and Superfund sites. In particular, most states are developing environmental registries for remediated brownfield sites with IECs, rather than developing a broader registry for all IEC Sites.

States are using land stewardship components that can be organized into twelve (12) general categories:

1. Government Controls: As part of an overall strategy, state or local governments use conventional government controls such as state laws, zoning, ordinances, building permits, and well drilling permits. Permits may outline specific requirements before authorizing an activity, such as drilling permit requirements, or may restrict or control certain land uses. The most common governmental controls establish groundwater use restrictions that limit or prohibit certain uses of groundwater for drinking and/or irrigation purposes. Governmental controls, especially zoning, generally do not work well alone, but are used in conjunction with other land stewardship tools to maintain IECs. However, one example of an effective measure is a city ordinance that limits the community’s drinking water source to the public water supply.

According to the Survey, thirty-eight (38) states use government controls as ICs to restrict or limit land uses.

States are using land stewardship components that can be organized into twelve (12) general categories:

1. Government Controls
2. Orders/Permits
3. Proprietary Controls
4. Deed Notices
5. UECA
6. Environmental Registry
7. Public Access
8. One-Call Notification
9. Government Audits
10. Third-Party Inspections/Certifications
11. Reopeners
12. Fees

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identified in Superfund site decision documents, including the IC objectives and the IECs created to meet those objectives.

2. Orders/Permits: Environmental regulators use administrative orders, consent decrees and permits to maintain and protect IEC Sites. Orders and permits are most commonly used to negotiate site use restrictions with potentially responsible parties for Superfund and RCRA sites and when a state takes enforcement action. However, this type of tool is only binding on the signatories of the order or permit. It does not “run with the land” and bind future land owners to the restrictions or requirements.

According to the Survey, twenty-three (23) states use administrative orders and consent orders, and fourteen (14) states use permits as ICs to restrict or limit land uses.

3. Proprietary Controls: Proprietary controls are legal property interests created under real property laws that rely on legal documents recorded in the chain of title for the site, and “run with the land” to bind future land owners. Examples of proprietary controls may include environmental covenants, deed land use restrictions, water withdrawal prohibitions and continuing right-of-entry easements for former owners or regulators to inspect, monitor and maintain the IECs.

These proprietary controls, commonly ICs, most often work in conjunction with ECs, which are physical controls or measures designed to eliminate the potential for human exposure to contamination by limiting direct contact with contaminated areas, or controlling contaminants from migrating through environmental media into soil, groundwater or off-site. Proprietary controls can be implemented between a seller and purchaser of real estate, without the environmental regulatory agency participating as a party to the proprietary control document.

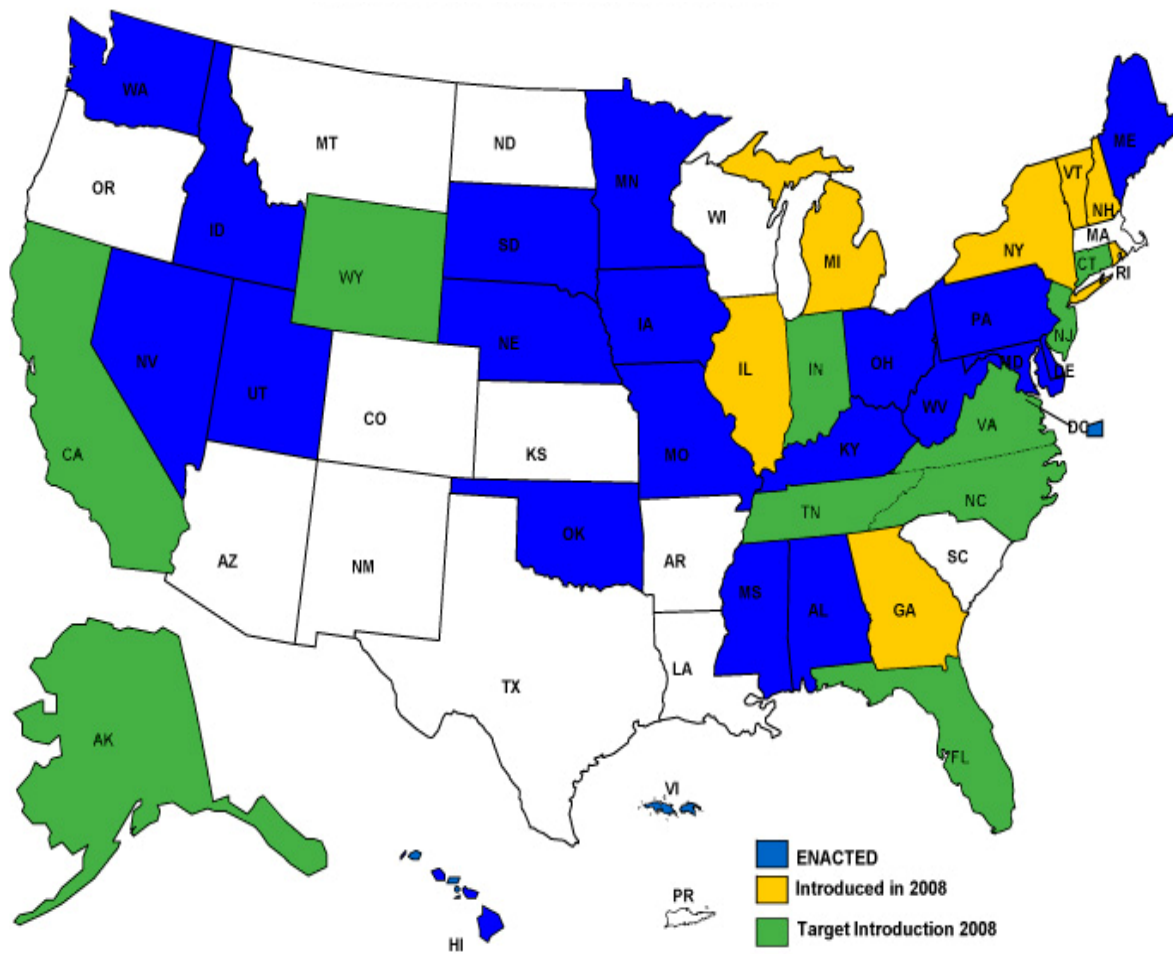
Most states have modified their real estate laws by adopting UECA to use proprietary controls for their VCP sites, and at least thirty-eight (38) states use proprietary controls as ICs.

4. Deed Notices: Deed notices are informational devices that describe the remediation that was conducted on a site, the constituents of concern and the remediation standards that were achieved. Deed notices are filed with property records as an advisory to provide environmental information to future buyers or users of the site. Deed notices are generally not enforceable by the regulatory agency or the party who conducted the remediation, but are often used as a secondary layer to help the reliability of IECs.

At least thirty (30) states use deed notices as ICs to help identify restrictions or limited land uses according to the Survey.

5. UECA: UECA provides the legal framework for federal and state agencies to create, modify, enforce and terminate IECs through the use of an environmental covenant that can be enforced by both regulatory agencies and remediating parties. Most states have adopted the UECA, and proactive states are preparing guidance and developing model forms of environmental covenants in order to make this instrument an effective tool that is easy to use.

Figure 2. Status of States Adopting UECA – (latest available update)  
(Source: [www.environmentalcovenants.org/ueca](http://www.environmentalcovenants.org/ueca), updated April 7, 2008)



6. Environmental Registry: An environmental registry contains information about IEC Sites, their remediation status and associated IECs. Although required under the Small Business Liability Relief and Brownfields Revitalization Act,<sup>16</sup> commonly known as the Brownfields Amendments, most states do not have a formal Internet environmental registry of IEC Sites. As of 2007, sixteen (16) states had no formal tracking system; ten (10) states had a simple spreadsheet that lists just brownfield or VCP sites with IECs; twelve (12) states had searchable databases on the Internet; and another twelve (12) states had searchable databases with mapping on the Internet. Few environmental registries about IEC Sites combine tracking, notification and outreach into a single system and few are comprehensive in reporting information about the nature and extent of the residual contamination and the specific terms of the IECs. However, most states have identified this tool as a top priority and are working toward an Internet accessible Geographic Information System (GIS) Mapping database for their environmental registry.<sup>17</sup> States are beginning to integrate GIS Mapping into their environmental registries, but few systems are integrating real property records or real estate infrastructure information to create more comprehensive site maps.

7. Public Access: Some states provide some public access to electronic data while reserving other environmental registries for internal environmental regulatory agency use. Moreover, some states allow public access to environmental registries, but have a number of registries for each remediation program.

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<sup>16</sup> Public Law 107-118 (H.R. 2869), amending Section 101(35)(B) of CERCLA. The Brownfields Amendments clarify CERCLA liability for certain landowners and potential property owners and provide liability protections for certain property owners. Liability protection is afforded to property owners providing they comply with specific provisions, including conducting all appropriate inquiries into present and past uses of the property and the potential presence of environmental contamination on the property.

<sup>17</sup> GIS Mapping is a digital system that captures, stores, analyzes, manages, and presents data that are linked to location by maps identifying location by physical address and latitude and longitude. Some of the states that identified the creation of an environmental registry as a top priority include: Alaska, California, Delaware, Georgia, Louisiana, Missouri, New Hampshire, New Jersey, Oklahoma and Tennessee. 2006 Interstate Technology & Regulatory Council Survey.



8. One-Call Notification: One-Call Systems, such as WV's "Miss Utility," exchange information between underground utilities or pipeline facilities and individuals or entities planning to dig or excavate on a site. Few states have integrated their One-Call Systems to notify people planning to excavate on an IEC Site about the environmental history and IEC requirements that may limit or direct excavation efforts. WVDEP has taken the lead and, to date, only WV and Maryland have integrated IEC Site information into their One-Call Systems. In 2006, WV amended the WV Underground Facility Damage Prevention Act to share information about IEC Sites. At present, several states are conducting pilot projects to integrate environmental information into their One-Call Systems.
9. Government Audits: Periodic government audits are conducted by environmental regulators to verify that the approved remedy is preserved, and the IECs were implemented as described in the site's approved remediation plan. Some states do not have a formal audit policy for site inspections while other states have adopted audit policies to conduct site inspections on an annual, bi-annual, 5-year or site-specific basis. Audit policies will continue to evolve as states grapple with limited resources and an expanding number of IEC Sites.

At least ten (10) states conduct site audits on an annual basis and five (5) states conduct site audits on a 5-year basis. In other states, site audits fall somewhere within a 5-year timeframe. Some states limit site audits on only Superfund and VCP sites while other states perform audits on more sites within the IEC Sites category.
10. Third Party Inspections/Certifications: In addition to government audits, some states require that third parties inspect and/or certify that the approved remedy is preserved, and the IECs were implemented as described in the site's approved remediation plan. In six (6) states, the party who conducted the remediation fulfills the third party inspection/certification requirements, while in ten (10) states the current landowner fulfills this obligation.
11. Reopeners: If the remedy is not preserved at a remediated site, the IECs were not implemented as described in the site's approved remediation plan, or the IECs are breached, most states have a law that enables the environmental regulator to reopen the liability protection that was granted upon completing the remediation at the site. Certain events can trigger the reopener including: 1) a new use (changing from industrial to residential use on a site achieving industrial

cleanup standards); 2) new information (including new information about the site or the protectiveness of the remedy, or previously unknown information that may affect the integrity of the approved remedy, or updated cleanup standards); 3) remedy failure; 4) IEC failure; and 5) fraud relating to the remediation or site inspections and certifications.

According to the Survey, twenty-five (25) states have reopeners based upon new information and sixteen (16) states have reopeners concerning new uses.

12. Fees: Most states charge a fee to participate in their VCP, but do not assess fees for the long-term stewardship of IECs.<sup>18</sup> Some states have specific IEC fees which are used to develop environmental registries, create and update records for environmental registries, maintain IECs, and fund site inspections to ensure that the IECs are protecting the IEC Sites. According to the Survey, only thirteen (13) states charge a specific fee related to the long-term stewardship of IECs.

### Section 2.3 Integrated Oversight Approach

In conducting the Survey, the IC Focus Group noted the following approaches that are being developed for land stewardship programs and recommended that these efforts be further reviewed and considered as the state develops its program:

- USEPA has finalized an IC Data Standard that defines the elements required for describing IC information in data registries;
- California Department of Toxic Substances Control developed “EnviroStor” as its environmental registry. EnviroStor lists sites with IECs which provides IC details, EC maps, remediation details and current status, IEC requirements, site history and inspection reports;
- Colorado Department of Public Health and the Environment developed an environmental registry database with GIS Mapping that enables the public to easily obtain information. The public can search on a specific address or

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<sup>18</sup> Overview at p. 9.

perform a number of different queries (e.g., contaminated sites within ½ mile of an address) in order to obtain information about IEC sites;

- Florida Department of Environmental Protection maintains an environmental registry that includes information for a broad number of remediated sites: brownfields, underground storage tanks, dry cleaners, Superfund, RCRA, federal hazardous and solid waste program sites, state enforcement action sites, and VCPs;
- Iowa Department of Natural Resources developed comprehensive guidance about creating, implementing and maintaining IECs for sites. There is a model environmental covenant template, preparation guidance, a model recording coversheet for covenant filing, and a model subordination and consent agreement;
- Rhode Island Department of Environmental Management conducts random inspections of IEC Sites and requires property owners to hire a qualified environmental professional to inspect their IEC Sites and provide an annual status report;
- Pennsylvania Department of Environmental Protection conducted an audit of all of its VCP sites in 2002 and found that 25% of the VCP sites with IECs did not have ICs filed as required; and
- New Jersey Department of Environmental Protection (NJDEP) requires an inspection and a certification of inspection results for IEC Sites to confirm that IECs are being properly maintained and continue to be protective. NJDEP has considerable guidance to explain the creation, implementation and monitoring of IECs.

In addition, WV has the opportunity to take an effective approach in further developing its environmental registry by linking it to the state's GIS mapping system (WV GIS System). Marshall University is developing the WV GIS System that includes 27 counties to date, and every county, for tax purposes, must have GIS maps in the WV GIS System. This link will make information sharing easier and help facilitate real estate transactions.

### **Section 3 Interim Recommendations for West Virginia's Voluntary Land Stewardship Program**

The proposed Voluntary Land Stewardship Program (VLSP, Program or VLSP entity as appropriate), is a comprehensive and integrated system for implementing, monitoring, maintaining, tracking and protecting IECs associated with post-closure obligations of IEC Sites. The IC Focus Group recommends the implementation, on an interim basis, of the proposed program as further described in the remainder of Section 3 of the report. Final recommendations will be presented upon conclusion of the pilot study described in Section 4.

#### **Section 3.1 Scope of Services**

The program's scope of services will be offered as either a comprehensive package of services or on an individual basis, *a la carte*, depending upon the needs and desires of the participating party and environmental regulatory agency when addressing the unique site conditions at each site. The services may include the following:

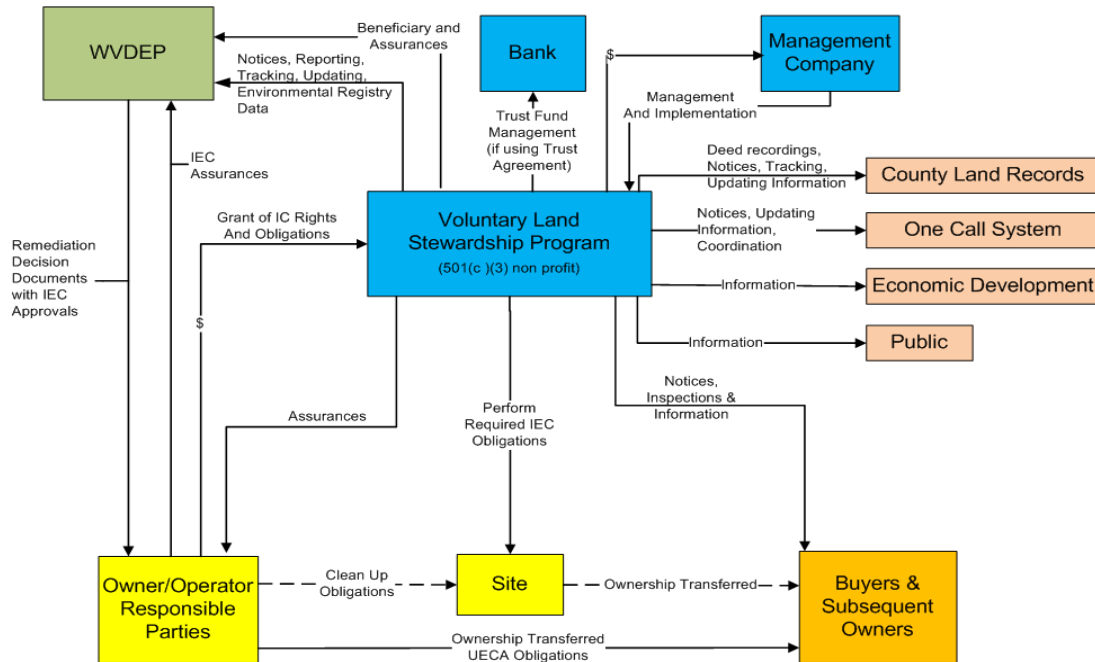
- Establish or maintain any ICs (e.g., environmental covenants, easements, deed notices or restrictions or prohibitions on use and allowed activities) by filing the appropriate documents or updating such documents when the site is leased, conveyed, subdivided or when remediation occurs, provided, however, that the VLSP's responsibilities for such activities are expressly identified for the VLSP and provided in the Institutional and Engineering Control Implementation Plan (IECIP) for the IEC Site (See Exhibit F to Appendix D – *Draft West Virginia Model Land Stewardship Trust Agreement*);
- Conduct physical inspections of the IEC Site, including inspecting or monitoring any ECs (e.g., media treatment systems, fences, caps and other mechanisms used as part of the remedy at the IEC Site) and site activities to assure that the IEC Site continues to comply with the IECs, such as maintenance of ECs (e.g., cap or cover repairs) and inspecting for compliance with restrictions of specific land uses;
- Monitor and operate any required media treatment systems and/or conduct routine groundwater monitoring and prepare any monitoring or inspection reports that may be part of the VLSP entity's responsibilities under the IECIP;
- Conduct periodic reviews of the county land records to monitor transfers or deed filings to assure that such records are consistent with the required IECs for the IEC

Site, and provide notices to the Clerk of the County Commission about the results of monitoring or tracking of such records;

- Develop an administrative record concerning the remediation at the IEC Site in an electronic database , respond to inquiries and coordinate the sharing of such data among various stakeholders, including the WVDEP, current owners, the remediating parties, if not the owners, other state or local agencies (such as economic development agencies), assessors, potential purchasers, land owners and tenants;
- Develop and maintain records and information for posting on the WVDEP environmental registry, or any other registry that is used for tracking IECs for IEC Sites in WV, and provide for public access to information; and
- Coordinate and share data with WV Miss Utility, the “One-Call” System, including verifying the location of ECs on the IEC Site, providing information about the remediation, and sharing any health and safety plans or soils management plans that may be associated with the IEC Site in order to assist any planned excavation at the IEC Site.

Figure 3. WV Voluntary Land Stewardship Program Roles and Responsibilities  
illustrate the roles and responsibilities that the VLSP entity will assume for IEC Sites:

West Virginia  
Voluntary Land Stewardship  
Program  
Roles and Responsibilities



### Section 3.2 Potential Customers or Project Examples

There are a number of potential customers or projects that may benefit from using the VLSP, including:

- A group of potentially responsible parties (Group) may convey an IEC Site to a new landowner without environmental remediation knowledge or experience, and want assurance that the IECs will be recognized and maintained. Rather than making the new landowner responsible for the IECs, the VLSP can provide periodic notices about IEC obligations to the new landowner and tenants, and can fulfill the IEC duties, such as inspect and maintain ECs (e.g., an asphalt parking lot serving as a cap, or fencing/landscaping of cap) and conduct groundwater quality monitoring and other OMM requirements. The Group may arrange for the long-term stewardship services that are needed to maintain the IEC Site for a significant period of time (e.g., 30 years), and thus mitigate the risks of problems when future property conveyances occur.

- A manufacturer may close its operations within the state and want to protect a portfolio of IEC Sites against the long-term liability exposure from the failure of IECs. The VLSP can provide the needed inspections and OMM services and provide a centralized source of all of the IEC Sites and stewardship information. The VLSP services and records can be an effective risk-management tool and may assist in facilitating property transfers.
- The state may have an IEC Site that is ready for reuse and can increase the marketability when all of the environmental records for the IEC Site are readily available through the VLSP and the IEC Site has a current subscription for VLSP services so the new employer can focus on negotiating site acquisition and its core business mission.
- A remediation party may want to maximize the value of an IEC Site when selling the property by providing a subscription of VLSP services for a period of time.
- A new landowner without environmental remediation knowledge or experience may subscribe to VLSP services to maintain IECs on its property so that the landowner can focus on its business endeavors and not be anxious about IECs obligations.

### Section 3.3 Typical IEC Site Enrollment Process

It is anticipated that the remediation party or parties will seek information about the VLSP services and capabilities while a site is undergoing remediation, and that this will be the most common situation. If an inquiry about the VLSP is made during remediation, the following steps explain the enrollment process:

#### *Step 1: At Start of Remediation.*

The VLSP entity will provide information about its services when the remediation party is starting the remediation process. The remediation party will receive: 1) information about the VLSP, 2) its organizational and financial structure, 3) enrollment and underwriting process, and 4) a description of available services. As part of the informational process, the Program will share examples about how the services are provided at similarly situated sites. The remediation party then has the option to participate in the program after the remediation is completed.

*Step 2: At Remedy Evaluation.*

When the remediation party is evaluating various remedy options, the VLSP entity will work with the remediation party to structure various service options in order to meet the short- and long-term stewardship needs associated with each remedy option. If interested in the VLSP services, the remediation party, the VLSP representative and the environmental regulator will discuss the options and draft a term sheet for agreed upon services. The remediation party would complete an application and include the term sheet when applying to participate in the VLSP. The VLSP enrollment/acceptance process would include the VLSP's review and analysis of the remediation documents and reports about the site and may require additional due diligence conducted by the VLSP entity. The enrollment/acceptance process would include an underwriting review that focuses on 1) the nature and extent of contamination; 2) the selected remedy, 3) the type of services selected and duration thereof; and 4) the financial costs associated with fulfilling the services.

Based upon such information and requested services (site conditions, service elements, duration, complexity, etc.) outlined in the term sheet, the VLSP representative would provide a cost estimate for services to the remediation party. If the VLSP entity determines that the VLSP cannot provide the services as specified in the term sheet, the VLSP entity may 1) request further information or modifications to the proposed services that may then be acceptable to the parties, 2) offer a subset of the services initially requested by the remediation party, or 3) undertake additional due diligence to generate sufficient information in order to provide the services requested.

The VLSP will require an application fee for these underwriting services. This fee will vary depending upon the size and complexity of the site, the IECs and requested scope of services. Once the parties agree upon the terms and update/finalize the term sheet, the VLSP will issue a commitment letter that will describe: 1) the specific services to be performed, 2) the duration of such services, 3) the financial terms for participation, and 4) a description of any legal prerequisites necessary for the VLSP entity to provide the requested services, such as, the grant of easements for site access.

*Step 3: At Remedy Selection.*

Once the remediation party elects to participate in the VLSP as part of the remedial strategy for the site and receives the VLSP commitment letter, the VLSP entity will work with the remediation party and the environmental regulator to include the VLSP entity's participation and services into the decision documents formalizing remedy



selection for the site. A draft IECIP would be prepared in anticipation of the VLSP services that would begin when the remediation work is nearing completion or has been completed.

*Step 4: At Remedy Completion.*

When the remediation is nearing completion (remedy selection and construction), the VLSP entity will work with the remediation party and the environmental regulator to enroll the site into the VLSP. A party may enter into a service agreement with the VLSP entity for performing the required activities and services on a shorter term basis, that is, 1 to 5 years, with renewals.

For long-term monitoring over a greater period of time where the remediating party wants to make a lump-sum payment, a remediating party may enter into a multi-party trust agreement with the VLSP and the environmental agency involved with an IECIP that will outline the needed services and duration. The remediation party will fund a VLSP trust that will be held and managed by a financial institution in order to provide funding for the long-term stewardship services. See Appendix D – *Draft Model Land Stewardship Trust Agreement*. Once the documentation is in place, the VLSP entity will begin its services as outlined in the VLSP agreement. Initial work may include: periodic site inspections, periodic groundwater sampling, assistance with filing environmental covenants, providing environmental and site information with the WV Miss Utility.

Section 3.4 Anticipated Agreements, Notices and Documentation

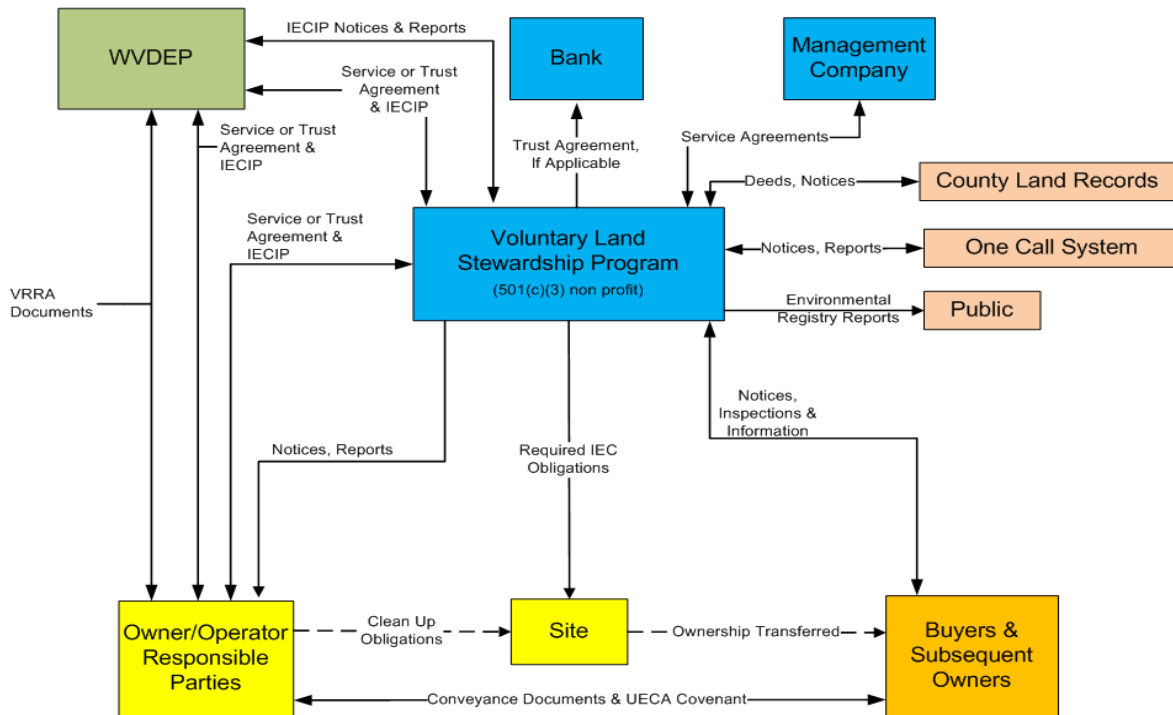
The following figure shows the types of contracts, notices, reports and other information that would be part of the VLSP so that all associated stakeholders would be informed about the services to implement the IECs and maintain the protectiveness of the remedy at the site. The VLSP entity would interact as follows with the stakeholders as shown on Figure 4:

<b><u>Stakeholders</u></b>	<b><u>Anticipated Agreements, Notices and Documentation</u></b>
<b>Owner/Operator, Potentially Responsible Parties (PRP), or Remediation Party (collectively, RP)</b>	VLSP entity will enter into service agreement or trust agreement with the RP that includes the IECIP that provides relevant site remediation information and all of the IECs associated with the site. The RP will receive copies of IECIP Notices and Reports (e.g., inspection reports, groundwater sampling reports, notices of site inspections and other documents based upon the requested services under the service or trust agreement, financial updates, and copies of notices sent to other stakeholders or received from them).
<b>WVDEP</b>	WVDEP will receive: 1) copies of the Service or Trust Agreement and the IECIP, 2) the IECIP Notices and Reports, 3) financial updates, and 4) information and data compiled into the environmental registry.
<b>Buyers &amp; Subsequent Owners</b>	Buyers and Subsequent Owners will receive notices and reminders about IEC obligations, and copies of inspection reports, and other site information as negotiated.
<b>General Public</b>	General Public will have access to the records and reports in the environmental registry about participating IEC Sites.
<b>One-Call System</b>	One-Call System will receive IEC information in order to exchange environmental information with individuals or entities planning to dig or excavate on an IEC Site.
<b>County Land Records</b>	Clerk of the County Commission where the property is located will receive environmental covenants and notices pertaining to maintaining IECs at participating IEC Sites.

Figure 4. WV Voluntary Land Stewardship Program Contracts and Documents

[Next page . . .]

West Virginia  
Voluntary Land Stewardship  
Program  
Contracts and Documents



### Section 3.5 Form of Entity

The Program is envisioned to be structured such that a WV nonprofit entity that will administer the IEC services. A nonprofit entity is a corporation formed to perform one or more charitable, educational, religious, literary, or scientific purposes. A nonprofit corporation does not pay federal or state income taxes on income the entity generates from activities or services in which the nonprofit entity engages to accomplish its objectives. This tax-exempt status is granted by federal and state governments because of the benefits the public derives from these organizations' activities.

The most common nonprofit federal tax exemption is provided by Section 501(c)(3) of the Internal Revenue Code. For the VLSP, the IC Focus Group recommended seeking nonprofit status under Section 501(c)(3) under one or more charitable purposes.

“Charitable purposes” fall within the 501(c)(3) subclass of *“lessening the burden of the government”* where the government identifies a need for the nonprofit entity to assist with a governmental service and the nonprofit collaborates with the government entity. This would require the non-profit entity and government agency to have a public--private collaboration, which is the intention of this initiative.

Another charitable purpose subclass is *“environmental protection for the benefit of the public”* where the VLSP services benefit the general public by protecting the integrity of IEC remedies. With this example of environmental protection for a public benefit, private parties need to participate by including their IEC Sites in the VLSP in order to satisfy the public benefit requirements of this subclass.

Potential benefits for organizing as a WV nonprofit entity with 501(c)(3) status include the following:

- No taxes on income generated,
- Ability to qualify for federal grants that may be needed to create and maintain the environmental registry and database or other potential stewardship components, and
- Ability to augment staff with environmental firms contracted at commercial market rates to ensure that the IEC services are fulfilled.

“Charitable purposes” fall within the 501(c)(3) subclass of *“lessening the burden of the government”* where the government identifies a need for the nonprofit entity to assist with a governmental service and the nonprofit collaborates with the government entity.

This would require the non-profit entity and government agency to have a public –private collaboration, which is the intention of this initiative.

### Section 3.6 Estimating Costs of Services

The IC Focus Group evaluated the CostPro software developed by the RS Means Company, one of the primary sources of cost information, to assist USEPA and states in evaluating RCRA closure and post-closure cost estimates for hazardous waste treatment, storage or disposal facilities. USEPA and states use CostPro to estimate the third-party contractor costs for performing OMM work at a closed site. The IC Focus Group evaluated a new edition released in 2009.

The IC Focus Group developed several typical IEC Site scenarios and CostPro was used to estimate the costs associated with OMM for these sites. While CostPro does not have all the OMM categories and supporting worksheets that the Program’s needs when developing cost estimates for services at a site, the cost estimates may be useful in preparing the initial estimates for comparison purposes. It was noted that CostPro has a national cost factor and a state cost factor and estimates in present value terms.

There is no ability to add an inflation factor to the equations and it was noted that the cost factor is not applied across each type of unit cost; thus, there can be as much as a 7% difference for some estimated expenditures. In addition, there are no categories for estimating costs associated with final closure activities, such as pump and treat, or in situ treatment of groundwater. However, it is possible to customize for these types of services when requested for a site.

Although Cost Pro will need some adjustments and customization, the IC Focus Group intends to continue to evaluate the software during the pilot study as well as use other costing models and techniques in order to develop the best methods for baseline costing.

## **Section 4 Pilot Study Implementation**

### **Section 4.1 Selected Sites and Services**

A VLSP pilot study will be implemented for several sites, including: 1) one site under the WV VRP, 2) a state portfolio of landfills with continuing leachate management, and 3) a federal RCRA corrective-action project).

Breakout sessions were conducted with IC Focus Group members to discuss possible sites and needed stewardship services that will be included in the pilot study.

Cleanup at Pilot Site No. 1 is nearing completion under the WV VRP, and there is some indication that the VRP completion will occur in the end of 2010. The remediation party has completed the remedial investigation, performed interim measures and completed closure of a wastewater pond. Permitting for a leachate collection system for a closed landfill is being reviewed by the WVDEP.

Pilot services for Pilot Site No. 1 may include the following:

- Engineering controls — maintaining the engineered cap in the former pond area; leachate collection from the closed landfill; groundwater monitoring; grass cutting/site maintenance; maintaining the engineered cap for the landfill area that is anticipated to be a concrete slab, and
- Institutional controls — certain restrictions (that is, no building construction in the former pond area, site access, and groundwater use restrictions).

A VLSP pilot study will be implemented for several sites, including:

- 1) one site under the WV VRP,
- 2) a state portfolio of landfills with continuing leachate management, and
- 3) a federal RCRA corrective-action project.

Pilot Site No. 2 consists of three (3) landfills under the Landfill Closure Assistance Program (LCAP) with pilot services to include leachate treatment and management, including hauling, treating and disposing of leachate into a POTW or other treatment facility permitted to accept the leachate. Potentially, there may be some need for landfill gas monitoring and management, groundwater/surface water monitoring, and final cover maintenance.

Pilot Site No. 3 has a variety of IECs associated with this federal RCRA corrective-action site. No monitoring will be necessary, but services will be provided to maintain ICs and ECs both on-site and off-site. The remediation party anticipates that it should have the Statement of Basis by the end of 2010. At present, the remediation party is seeking the needed access agreements with off-site property owners.

#### Section 4.2 Implementation

The pilot study implementation effort will include the following tasks based upon the interim recommendations:

1. Create a nonprofit entity with a mission to provide a centralized, comprehensive, uniform and reliable source of oversight, monitoring and information about IEC Sites. Work will include developing the appropriate organizational structure, by-laws, and other managerial documents needed for the nonprofit entity.
2. Seek approval from the Internal Revenue Service (IRS) to operate under the 501(c)(3) nonprofit status. Work will include preparing the necessary application and documents needed to obtain nonprofit status and communication with the IRS, if appropriate.
3. Set up a voluntary program to offer the services described in Section 3.1 and developed using the best practices outlined in Section 2.2. Work effort will include developing or refining applications, site acceptance criteria, service descriptions, service and trust agreements, templates for notices, reports and other communications.
4. Continue to test CostPro software, designed to assist in estimating closure and post-closure OMM costs, and other costing methods to develop a baseline cost-estimating approach to determine program service fees. Work will include using a number of costing methods,

including testing CostPro software, to develop a baseline estimate to share with potential customers as well as developing accurate estimations for contracted services.

5. Implement a pilot study to test and refine the program as described in Section 4. Work includes conducting the IEC activities described for the pilot sites in Section 4.2.
6. Develop a web-based, public-accessible, environmental registry that consists of material site remediation documentation and records about site inspections and other pertinent information. Work includes developing a scope of work and description of a recommended environmental registry. The scope of work and recommendations will be based upon 1) existing WVDEP's environmental registry, 2) past work with USEPA with the ICTS (an IEC database), 3) current county databases or other databases about real property, and 4) other states' best practices.
7. Pursue funding from a variety of sources to develop the environmental registry and link the environmental registry to real property records to better manage, share and coordinate IEC Site information with other interested parties. Continue to evaluate internet-based systems used for property research, such as Google Earth and Zillow (a real estate research website), that could be used to help make IECs and other information available to those who use these sites.

#### Section 4.3 Process Evaluation

After the pilot study is implemented, a process evaluation will be conducted to analyze the early development and implementation of the Program. The process evaluation will: 1) describe the activities conducted during the pilot study; 2) describe the results and outcomes of the pilot study; 3) identify adjustments that were adopted during the pilot implementation; and 4) identify adjustments and modifications that are recommended for full program implementation.

Some questions to consider during the process evaluation include:

1. What aspects of the original program model were implemented as planned and what had to be changed and why?

2. What aspects of the program worked particularly well, and why?
3. Did any barriers arise that were not anticipated?
4. Based on lessons learned, what process improvements and modifications are recommended for the program?

The process evaluation will be a tool to assist the IC Focus Group in making final recommendations about Program implementation.



**Appendix A**

Charge to the IC Focus Group

## **Appendix A – CHARGE TO THE IC FOCUS GROUP**

When the IC Focus Group was formed, the WVDEP shared its objectives and group work tasks for this initiative:

WVDEP's Objectives:

- Remove or mitigate regulatory barriers and impediments to economic development at formerly used industrial and commercial sites,
- Facilitate the availability of site remediation records to improve the transparency of governmental oversight so that remediated sites can be more readily conveyed and reused in commerce,
- Provide additional protections and oversight of institutional and engineering controls used in environmental remediation and reclamation to ensure short and long term protection of human health and the environment,
- Encourage reuse of remediated sites as well as encourage optimization at sites with long term remedial operations and maintenance,
- Ensure historical continuity of WVDEP's and others institutional knowledge of remediated sites,
- Maximize available resources, and
- Ensure availability of risk-based remediation in West Virginia.

Work Tasks for the Voluntary Land Stewardship Program Framework:

- Evaluate best practices of existing federal and state institutional and engineering control programs implemented or proposed throughout the country,
- Explore the range of services for the program – inspection, monitoring, reporting, information repository, correction of remedy breach and any other offerings,
- Evaluate how a state voluntary land stewardship program would inter-relate with existing programs (Uniform Environmental Covenants Act, Miss Utility Program, requirements from other environmental programs, real estate transfers),

- Evaluate current and anticipated levels of risk resulting from the universe of remediated sites (i.e., any federal or state environmental or reclamation program, including brownfields, underground storage tanks, landfill closure, open dump, hazardous waste or mine reclamation) and benefits if program was implemented,
- Define the state voluntary land stewardship program's structure, services and initial group of participating sites (state sites) to launch the voluntary land stewardship program,
- Conduct financial analysis to determine appropriate initial service offerings, additional service offerings and long-term program viability,
- Analyze whether any legislation is necessary to create and implement the proposed voluntary land stewardship program,
- Systematize state, county and local land records with regard to properties in the program,
- Develop an organized and effective method for the state to take title to properties in the program where economic development interests will be served, and
- Ensure long-term financial viability of the VLSP entity.

**Appendix B**

A Survey of States'  
Institutional Controls &  
Engineering Controls/Land  
Stewardship Programs Dated  
4/1/09

Survey of States' Institutional Controls & Engineering Controls / Land Stewardship Programs 4/1/09

Locations		Types of Institutional & Engineering Controls					Tracking Mechanisms			Land Stewardship Management			
Region	State	Gov't Controls <sup>1</sup>	Orders Permits <sup>2</sup>	Proprietary Controls <sup>3</sup>	Deed Notices	UECA <sup>4</sup>	Registry <sup>5</sup>	Public Access <sup>6</sup>	One Call <sup>7</sup>	Gov't Audit <sup>8</sup>	3 <sup>rd</sup> Party Inspection Certification <sup>9</sup>	Reopeners <sup>10</sup>	Specific Fees
1	CT			Y		P	Y	Y					
	ME	Y Z	O	Y	Y	Y		Y				NU NI	
	MA	Y	O	Y	Y	-	Y	Y		20%A	R	NI	
	NH	Y Z	P	Y		P	Y	Y			L	RF	Y
	RI	Y		Y		P		Y		A	R	NU NI CF	
	VT	Y Z	O	Y	Y	P	Y	Y			-	NU	Y
2	NJ			Y	Y	P	Y 2	Y 1		B	L	NI	Y
	NY	Y		Y	Y	P	Y 2		P	A	L	NU CF NI	
	PR	-	-	-	-	-	-	-	-	-	-	-	-
3	DE	Y	O	Y		Y	Y	Y	C	A		NI	
	DC	Y		Y		Y	Y					NU NI F	
	MD	Y Z	O P	Y	Y	Y	Y	Y	Y	1-5YR	L	NU CF NI	Y
	PA	Y Z		Y	Y	Y	Y	Y	P	A	R	NU NI F	
	VA				Y	P	Y	Y			-		
	WV	Y				Y	Y	Y	Y			NU RF NI F	
4	AL	Y Z	O P	Y	Y	Y	Y					NU	Y
	FL	Y	O	Y		P	Y 3	Y			L		
	GA	Y Z	O P	Y	Y	P	Y	Y		SS		NU	Y
	KY	Y		Y	Y	Y	Y	Y		5YR	R	NI	
	MS	Y	O	Y	Y	Y	Y 2	Y	C		R	NI F	
	NC	Y		Y		P							
	SC	Y	O	Y	Y	-	Y	Y		5YR	L	NU	
	TN		O P	Y	Y	P	Y	Y		5YR	R	NU RF NI	Y
5	IL	Y	O P	Y		P	Y	Y		A	-		
	IN	Y Z		Y		P	Y	Y					
	MI	Y Z		Y	Y	P	Y 2	P				NI	
	MN	Y Z	O P	Y	Y	Y	Y 2	Y			-	NU NI	
	OH	Y		Y		Y	Y	Y		5YR		NU	
	WI					-	Y 2	Y	P		L	NI	Y
6	AR					-	Y	Y					
	LA	Y Z	O P	Y	Y	-					L	NU	
	NM				Y	-		Y		2-5YR	L	NI	Y
	OK	Y Z	P	Y	Y	Y				SS		RF NI F	
	TX	Y Z	P	Y	Y	-						NI	
7	IA	Y Z		Y	Y	Y	Y	Y		A	-	NU NI	
	KS		O		Y	-		P					Y
	MO	Y Z	O P	Y	Y	Y		N		A		RF CF	Y
	NE	Y	O P	Y	Y	Y				A		CF	
8	CO	Y Z				-	Y	Y			L	NI	Y
	MT	Y Z	O P	Y	Y	-						NI	
	ND					-							
	SD	Y				Y							
	UT	Y Z	O P		Y	Y	Y	Y		SS		NI	Y
	WY	Y	O	Y	Y	P			Y		-	CF NI	
9	AZ			Y		-				A		NI	
	CA	Y		Y		P	Y 3	Y	P				
	HI					Y							
	NV					Y	Y	Y					
10	AK		O	Y	Y	P	Y 2	Y				NI	
	ID	Y				Y							
	OR	Y Z	O	Y	Y	-	Y 2	Y	Y	5YR	L		
	WA	Y Z	O	Y	Y	Y	Y 2	Y	Y	5YR	L		
	Total	38	O - 23 P - 14	38	30	Y - 20 P - 17	34	P - 2 Y - 33	P-4 Y-5	A-10	R-6 L-10	NU-16 NI-25	13

- <sup>1</sup> Government Controls means state laws, zoning, ordinances, building permits, and well drilling permits. Y = Yes; Z = Zoning.
- <sup>2</sup> O = Orders; P = Permits.
- <sup>3</sup> Proprietary controls include, but are not limited to, environmental covenants, deed environmental restrictions, water withdrawal prohibitions and continuing right of entry easements.
- <sup>4</sup> UECA means Uniform Environmental Covenants Act. For more information, see: [www.environmentalcovenants.org](http://www.environmentalcovenants.org). Y = Yes; P = Pending.
- <sup>5</sup> Registry means an environmental registry or database of information about site with institutional controls & engineering controls (IECs). Y = Yes; 2 or 3 = Number of databases.
- <sup>6</sup> Public Access: Y = Yes; Y1 = at least 1 registry is publicly available; N = No; P = Pending.
- <sup>7</sup> One Call Notification means using the Miss Utility, One Call System or service provider to exchange information between underground utilities or pipeline facilities and individuals or entities planning to dig or excavate on a site. C = Considering, Y = Yes, and P = Pilot.
- <sup>8</sup> Government Audits means audits or inspections to determine whether IECs were implemented, remedy is in place, and there is no change in land use that would affect the remedy. A = Annual; *A* = Annual is planned; B = Biannual; 1-5YR = every 1 to 5 years depending upon site-specific circumstances; SS = Depends on site-specific circumstances; 20%A = 20% of completed sites annually.
- <sup>9</sup> 3<sup>rd</sup> Party Inspection means that a non-governmental entity is responsible for inspection or certification. R = Responsible party, L = Current land owner.
- <sup>10</sup> Reopeners mean that the liability protection may be reopened upon certain events. NU = New use; NI = New information, including new information about the site or protectiveness of the remedy, previously unknown information that may affect the integrity of the approved remedy, or updated cleanup standards; RF = Remedy failure; CF = Covenant failure – failing to fulfill obligations relating to IECs, i.e., deed recording, inspection or certification; F = Fraud.

SOURCES: *State Status in the Implementation of Institutional Controls: Summary of Inventory Findings*, ASTSWMO State Superfund Focus Group, June 2007; *An Overview of Land Use Control Management Systems*, The Interstate Technology & Regulatory Council Brownfields Team, December 2008; *Notes from the Field: Land Use Controls Tracking: A Status Report*, A. Jiron, S. Smith, S. Eddy & K. Hagg, April 19, 2006, and other research on state programs.

## **Appendix C**

Universe of West Virginia Sites  
from Federal and State  
Remediation Programs

## **Appendix C – UNIVERSE OF WEST VIRGINIA SITES FROM FEDERAL AND STATE REMEDIATION PROGRAMS**

In West Virginia (WV), there are a number of sites using Institutional Controls and Engineering Controls (IECs) as part of the remedy as of September 2010. Universe comprises sites remediated or closed under any federal or state environmental or reclamation program, including brownfields, underground storage tanks, landfill closure, open dump, hazardous waste and former mining sites with ongoing water treatment as part of mine reclamation efforts.

### **COMPLETED IEC SITES**

#### **30 LANDFILL CLOSURE ASSISTANCE PROGRAM (LCAP) LANDFILLS.**

The LCAP was established in 1991 by WV Code §§ 22-16-3(a) et seq. and is governed by State Rule 33CSR40. The program, funded by a special solid waste disposal fee, aids the owners/permittees of landfills that were required to cease operations because of statutory closure deadlines for non-composite lined facilities. LCAP designs and constructs all closure-related activities needed to manage leachate sufficiently; control sediment and erosion; manage natural gas generated by the landfill, monitor groundwater and provide a final cover cap on non-composite lined landfills.

#### **90 VOLUNTARY REMEDIATION PROGRAM SITES.**

The Voluntary Remediation Program stems from the WV Legislature's Voluntary Remediation and Redevelopment Act (WV Code §§ 22-22-1 et seq.), which encourages voluntary clean-ups of contaminated sites and redevelopment of abandoned and under-utilized properties, in the hope of counteracting the lack of growth on sites with contamination or perceived contamination. The administrative program is set out in the State Rule 60CSR3, which became effective on July 1, 1997. The Voluntary Remediation Program seeks to identify and address potential contamination at a given site, sets applicable remediation standards, and requires that the site maintains these standards. Participants in the program benefit from a limitation on enforcement actions by the WV Department of Environmental Protection (WVDEP), limited liability under environmental laws and rules, the ability to redevelop sites with existing industrial infrastructure at a lower price, and financial incentives to invest in brownfields.



**4 RESOURCE CONSERVATION AND RECOVERY (RCRA) CORRECTIVE ACTION (CA) SITES WITH IECS & CONSTRUCTION COMPLETE.**

The Resource Conservation and Recovery Act (RCRA) Corrective Action program was established when Congress amended the RCRA program (42 U.S.C. §§ 6901 et seq.) via the Hazardous and Solid Waste Amendments of 1984 (Public Law 98-616) to add a remediation component to clean up contamination at facilities that treat, store or dispose of hazardous waste. RCRA CA is administered by USEPA and 43 authorized states and territories, including WV. Under the RCRA CA process, closures are specified as occurring with or without IECS. Furthermore, the status of “construction complete” is used to designate the implementation phase of a final remedy where physical construction has been completed and the remedy is operating as designed. With construction complete, cleanup objectives have not necessarily been met, but the remedial measures are in place and operating as intended. Cleanup activities would typically be limited to continued operation, maintenance and monitoring of the remedy USEPA, 2004. Handbook of Groundwater Protection and Cleanup Policies for RCRA Corrective Action for Facilities Subject to Corrective Action Under Subtitle C of the Resource Conservation and Recovery Act. EPA530-R-04-030. Office of Solid Waste and Emergency Response. April.

**32 RCRA CA SITES THAT HAVE NOT ATTAINED CONSTRUCTION COMPLETE.**

See description of RCRA CA above. At these sites, investigation and pre-construction activities are ongoing.

**9 NATIONAL PRIORITIES LIST (NPL) SUPERFUND SITES.**

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA; enacted December 11, 1980), commonly known as Superfund, created a trust fund for cleaning up abandoned or uncontrolled hazardous waste sites and provided broad Federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA was amended in the Superfund Amendments and Reauthorization Act (SARA) enacted October 17, 1986. The NPL, Appendix B of the National Contingency Plan, is a list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States. The NPL is prepared by USEPA under statutory authority of Section 105(a)(8)(B) of CERCLA as amended, which establishes criteria for screening under the Hazard Ranking System (HRS). Listing of a site on the NPL guides USEPA in the following: determining which

sites warrant further investigation to assess the human health and environmental risks associated with a site; identifying appropriate CERCLA-financed remedial actions; notifying the public; and serving notice to potentially responsible parties that USEPA may initiate CERCLA-financed remedial action. A site listed or proposed to be listed on the NPL is excluded from participation in the WV Voluntary Remediation Program under the VRRRA, but this exclusion would not prevent such a site from being included in the VLSP.

### **POSSIBLE IEC SITES**

Other sites that may be considered for future program projections include the following:

#### **597 LEAKING UNDERGROUND STORAGE TANK (LUST) PROGRAM PRIORITY 1 & 2 SITES PENDING CLOSURE.**

The LUST Program in WV has been administered by the WVDEP with USEPA authorization since September 1997. The LUST Program addresses the cleanup of released regulated substances, primarily petroleum products, from such sources as overfilling, spilling, or leaking of underground storage tanks and piping.

#### **19 CURRENTLY PERMITTED SANITARY LANDFILLS.**

Sanitary landfills are regulated under authority of the WV Solid Waste Management Act (WV Code §§ 22-15). Permits are issued by the WV DEP Solid Waste Unit to install, establish, construct, modify, operate and close facilities within the state.

#### **3 CURRENTLY PERMITTED WASTE TIRE FACILITIES.**

Waste tire facilities are regulated under authority of the WV Solid Waste Management Act (WV Code §§ 22-15-21). Permitted facilities include sanitary landfills, waste tire monofills, and waste tire reprocessing facilities.

#### **149 VOLUNTARY REMEDIATION PROGRAM SITES CURRENTLY WITHOUT A CERTIFICATE OF COMPLETION (EXCLUDING ANY PROJECTED PARCELING OF SUCH SITES).**

See description of Voluntary Remediation Program above. A Certificate of Completion is issued once the applicable standards for the areas and contaminants covered by the Voluntary Remediation Agreement are met, and the applicant has complied with the Agreement and approved work plans for the site.

**122 FORMER MINING SITES WITH ONGOING WATER TREATMENT AS PART OF MINE RECLAMATION EFFORTS.**

Former mining sites with ongoing water treatment as part of mine reclamation efforts could also be included in the program. Abandoned mines are managed under two state-administered WV DEP programs under the Office of Abandoned Mine Lands & Reclamation and the Office of Special Reclamation. The Office of Abandoned Mine Lands & Reclamation manages the reclamation of lands and waters affected by mining prior to passage of the Surface Mining Control and Reclamation Act (SMCRA) in 1977. The Abandoned Mine Lands program is funded by a fee on mined coal. The Office of Special Reclamation is mandated by the state to protect public health, safety and property by reclaiming and treating water on all bond forfeited coal mining permits since 1977 in an expeditious and cost effective manner (WV Code §§ 22-3-17). The program is funded by forfeited bond collections, civil penalties and the Special Reclamation Tax on mined coal. The WV DEP Division of Mining and Reclamation is responsible for permitting of mines being reclaimed by owners/operators.

**685 CERCLA Sites.**

In addition, there are 184 active, as well as 501 archived, CERCLA sites (see description of CERCLA above, under NPL Sites) in WV according to the USEPA's on-line database. A number of these CERCLA sites may require remediation, potentially utilizing IECs as part of the remedial strategy.

**Appendix D**

Draft West Virginia Model Land  
Stewardship Trust Agreement

## WEST VIRGINIA VOLUNTARY LAND STEWARDSHIP PROGRAM

### Model Land Stewardship Trust Fund Agreement

#### TRUST AGREEMENT

TRUST AGREEMENT (“Trust” or “Agreement”), entered into this \_\_\_\_ day of \_\_\_\_\_, 20\_\_, by and among \_\_\_\_\_, with its principal place of business at \_\_\_\_\_ (“Grantor”), and the West Virginia Land Stewardship \_\_\_\_\_, a West Virginia non-profit *[all TBD as we move forward]*, with its principal place of business at \_\_\_\_\_ (“Trustee”), and the State of West Virginia, acting by and through the Department of Environmental Protection (“State” or “DEP”).

WHEREAS, the WV Voluntary Remediation and Redevelopment Act, WV Code § 22-22-1 through § 22-22-21 (“VRRRA”), establishes the State’s voluntary cleanup and brownfields programs, as well as long-term stewardship authority (“VCP”); and

WHEREAS, the Grantor has entered into a Voluntary Remediation Agreement with the Director of the DEP dated \_\_\_\_\_, (“VRA”) under the VCP to address the release of contaminants (“Remediation”) at the former \_\_\_\_\_ (“Site”) located at \_\_\_\_\_, \_\_\_\_\_ County, West Virginia; and

WHEREAS, pursuant to the terms of the VRRRA Final Report dated \_\_\_\_\_, there will be certain institutional controls and engineering controls (collectively, “IECs”) implemented as part of the Remediation under the VRRRA, WV Code § 22-22B-1; and

WHEREAS, the Grantor has elected to use the West Virginia Voluntary Land Stewardship Program (“VLSP”) to provide for the assurance and oversight services for *[insert “all” or “part”]* of IECs utilized for the Remediation at the Site identified in the Institutional and Engineering Controls Implementation Plan (“IECIP”) attached hereto; and

WHEREAS, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this Agreement, and the Trustee is willing to act as trustee; and

WHEREAS, the Grantor has elected to establish and fund this trust to assure funds are available to provide for such IECs identified herein; and

WHEREAS, the Grantor, acting through its duly authorized officers or representatives and with the approval of the DEP, has selected to participate in the West Virginia Voluntary Land Stewardship Trust; and

WHEREAS, the Trustee has been induced, and has agreed and is willing to perform the duties as are required to be performed pursuant to this Agreement; and

WHEREAS, the DEP has joined in this Agreement to indicate its acceptance of the terms and conditions set forth in, as well as the powers and authorities granted by this Agreement.

NOW, THEREFORE, in consideration of the foregoing and of the mutual promises and undertakings of the parties as set forth herein, and with the intention of being legally bound hereby, the Grantor, the Trustee and the DEP agree as follows:

Section 1. Definitions. As used in this Agreement:

- (a) The term “Grantor” means the party who enters into this Agreement and any successors or assigns of the Grantor.
- (b) The term “Trustee” means the trustee who enters into this Agreement and any successor trustee.
- (c) The term “DEP” means the State of West Virginia, acting by and through the Department of Environmental Protection or any successor agency.
- (d) The term “Institutional and Engineering Control Implementation Plan” means the plan attached as Exhibit “F” hereto that states the specific services that the VLSP will provide as well as additional site and remedy information.
- (e) The term “Property” means cash, securities, or other liquid assets acceptable to the Trustee to fund the Trust, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. *[If the transaction may involve asking the Trust to accept real property, the document would need to be modified accordingly based upon the transaction terms agreed by the parties.]*

Section 2. Site Remediation Documentation. This Agreement pertains to the Institutional and Engineering Controls (“IECs”) specifically identified in the IECIP as the required activities that the Trustee will fulfill and relating to the Remediation conducted at the Site, and the following documents about the Remediation and the Site are incorporated by referenced and attached hereto:

- (a) The VRRRA Program Application dated \_\_\_\_\_. (attached as Exhibit “A”).
- (b) The Voluntary Remediation Agreement dated \_\_\_\_\_, and Amendments dated \_\_\_\_\_ (attached as Exhibit “B”).
- (c) The Final Report and Residual Risk Assessment for the Site *[or Area \_\_, as appropriate]*, dated \_\_\_\_\_ (attached as Exhibit “C”).

- (d) A legal description of the Site [or Area \_\_\_\_\_, as appropriate] (attached as Exhibit “D”).
- (e) A description of the contaminants at the Site *[or Area \_\_\_\_, as appropriate]* for which applicable standards are met (attached as Exhibit “E”).
- (f) The IECIP that describes the IECs that are being used at the Site *[or Area \_\_\_\_, as appropriate]* to achieve a remediation standard and the party responsible for maintaining such IECs (attached as Exhibit “F”).
- (g) The environmental covenant recorded for this Site (attached as Exhibit “G”).

Section 3. Establishment of Fund. The Grantor and the Trustee hereby establish a trust fund (“Fund”) for the benefit of the DEP and to provide funding for the Trustee to perform the activities required to be performed by the Trustee as identified and described in the IECIP. The Grantor and the Trustee intend that no third party shall have access to the Fund except as provided herein. The Fund and Property held therein by the Trustee pursuant to this Agreement shall not be subject to assignment, alienation, pledge, attachment, garnishment, sequestration, levy or other legal process, either voluntary, involuntary or by operation of law, by, on behalf of, or in respect of the Grantor and shall not be subject or applied to the debts, obligations or liabilities of the Grantor, including, without limitation, any direct action or seizure by any creditor or claimant under any writ or proceeding at law or inequity.

Furthermore, the Grantor shall have no legal title to any part of the Trust Fund, and it is the intention of the parties to this Trust Agreement that Grantor’s entry into this Agreement shall remove all of the Grantor’s interest in the Trust from Grantor’s estate under the U.S. Bankruptcy Code or similar laws.

Section 4. Payments Constituting the Fund. Payments made to the Trustee for the Fund shall consist of cash, securities, or other liquid assets acceptable to the Trustee (collectively referred to as “Property”). The Fund is established initially as consisting of the Property, which is acceptable to the Trustee, described in Schedule A attached hereto. Such Property and any other Property subsequently transferred to the Trustee are referred to as the “Fund,” together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. All payments made to the Trust or deposits into the Trust by Grantor shall be irrevocable once made, and upon delivery thereof, by or on behalf of Grantor, all interest of the Grantor therein shall cease and terminate, and no part thereof, nor any income therefrom, shall be used for or devoted to purposes other than for the exclusive benefit of the Trust as provided herein. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount of, or adequacy of the Fund, nor any duty to collect from the Grantor, any payments necessary to discharge any obligations of the Grantor established by DEP for the Site under the VCP.

Section 5. Payment for Required Activities Specified in the IECIP. The Trustee shall conduct, or contract to conduct, such required activities as described in the IECIP, and make payments from the Fund of expenditures for such activities under this Agreement.

Section 6. Trust Management. The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with WV Code § 44-6C-2, subject, however, to the provisions of this section. The Trustee shall establish the fund in a West Virginia chartered or national bank or financial institution with trust powers or a trust company, with offices in West Virginia and whose trust activities are examined or regulated by a state or federal agency.

In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge its duties with respect to the Fund solely in the interest of the DEP and with the care, skill, prudence and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims, except that:

- (a) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, (15 U.S.C. § 80a-2(a)), shall not be acquired or held, unless they are securities or other obligations of the Federal or a State government; and
- (b) The Trustee is authorized to invest the Fund in time or demand deposits of the financial institution holding the Fund, to the extent insured by an agency of the Federal government, and in obligations of the federal government such as GNMA, FNMA, and FHLM bonds and certificates of State and Municipal bonds rated BBB or higher by Standard & Poor's or Baa or higher by Moody's Investment Services; and
- (c) For a reasonable time, not to exceed 60 days, the financial institution holding the Fund is authorized to hold uninvested cash, awaiting investment or distribution, without liability for the payment of interest thereon.<sup>19</sup>

Section 7. Commingling and Investment. The Trustee is authorized in its discretion:

- (a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

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<sup>19</sup> Section 6 uses the standard language contained in RCRA hazardous waste financial assurance trust agreements and state nuclear decommissioning agreements; future IC Focus Group work will consider whether these terms need modification in light of the current economic situation.



- (b) To purchase shares in any investment company registered under the Investment Company Act of 1940 (15 U.S.C. § 80a-1 et seq.), including one that may be created, managed, underwritten, or to which investment advice is rendered, or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretion conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

- (a) To establish or maintain any institutional controls, (e.g., environmental covenants, easements, deed notices or restrictions or prohibitions on use and allowed activities, by filing the appropriate documents or updating such documents when the Site is leased, conveyed, subdivided or when remediation occurs, provided however, that the Trustee's responsibilities for such activities are expressly identified for the VLSP and provided in the IECIP;
- (b) To make physical inspections of the Site, including inspecting or monitoring any engineering controls, (e.g., media treatment systems (or monitored natural attenuation), fences, caps and other mechanisms used as part of the remedy at the Site), to assure that the Site continues to comply with the IECs including inspecting for compliance with restrictions of specific land uses and making cap or cover repairs;
- (c) To monitor and operate any media treatment systems and/or conduct routine groundwater sampling and prepare reports for any monitoring or inspection reports that may be part of the Trustee's responsibilities under the IECIP;
- (d) To conduct periodic reviews of the county land records to monitor transfers or deed filings to assure that such records are consistent with the required IECs for the Site, and to provide any notices to the Clerk of the County Commission about the results of any monitoring or tracking of such records;
- (e) To develop an administrative record concerning the remediation at the Site in an electronic database, respond to inquiries and coordinate the sharing of such data among various stakeholders, including the DEP, the Grantor, other state or local agencies, such as economic development agencies, potential purchasers, land owners and tenants;
- (f) To develop and maintain records and information for posting on the DEP environmental registry, or any other registry that is used for tracking IECs for real property in West Virginia, and provide for public access to information;
- (g) To coordinate and share data with WV Miss Utility, the "one-call" system, including verifying the location of engineering controls on Site, providing information about the Remediation, and sharing any health and safety plans or soils management plans that may be associated with the Site in order to assist any planned excavation at the Site;

- (h) To sell, exchange, convey, transfer, or otherwise dispose of any personal property or fixtures that are remediation equipment or systems (collectively, "Remediation System") held by it or being used at the Site under the IECIP, provided that such Remediation System is no longer needed to fulfill the required activities under the IECIP and such disposal does not affect the use of the Site;
- (i) To make, execute, acknowledge, and deliver any and all documents of notice, monitoring, reporting, transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;
- (j) To register any securities held in the Fund in its own name, or in the name of a nominee, and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, to reinvest interest payments and funds from matured and redeemed instruments, to file proper forms concerning securities held in the fund in a timely fashion with appropriate government agencies, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee or such depository with other securities issued by the U.S. Government, or any agency or instrumentality thereof, or a Federal Reserve Bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;
- (j) To deposit any cash in the Fund in interest-bearing accounts maintained, or savings certificates issued, by a West Virginia chartered or national bank or financial institution with trust powers or a trust company, with offices in West Virginia and whose trust activities are examined or regulated by a state or federal agency; and
- (l) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for financial, engineering and legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

The Trust is intended to be categorized, for federal income tax purposes, as a grantor trust in accordance with and under the provisions of the U.S. Treasury Regulation Section 301.7701-4(e)(1), (2), (3) and (4), and any implementing regulations cited therein or any corresponding successor provision, and as a West Virginia charitable trust for state income tax purposes. *[Need to verify]*

Section 10. Reports and Valuation. The Trustee shall be responsible for the keeping of all appropriate books and records relating to the receipt and disbursement of all monies and assets under this Trust Agreement. In addition, whenever called upon to do so, the Trustee shall exhibit to the Grantor and the DEP all documents, instruments, reports and other information relating to

the Trust and IECIP. The Trustee shall at least quarterly furnish the Grantor and DEP a statement providing an accounting of all transactions or activities involving the Trust and IECIP.

After payment has been made into this Fund, the Trustee shall annually, at least 30 days before the anniversary date of receipt of payment into the Fund, furnish to the Grantor and to DEP a statement confirming the value of the Fund. Any securities in the Fund shall be valued at market value as of no more than 60 days before the anniversary date of the establishment of the Fund.

Section 11. Advice of Counsel. The Trustee may from time to time consult with counsel with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting on the advice of counsel.

Section 12. Trustee Compensation. The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing with the Grantor. (See Schedule C). Compensation of the Trustee and all other reasonable and customary expenses incurred by the Trustee, including fees for legal services rendered to the trustee, shall be taken and paid from the Fund at the time that the Trustee shall deem appropriate.

Section 13. Successor Trustee. *[TBD – based upon state law and current trust law]*

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee are provided in this Agreement and attachments. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions made herein. If DEP issues orders, requests, or instructions to the Trustee these shall be in writing, signed by DEP or its designees, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions; provided however, that the Trustee shall not be obligated beyond the terms of this Agreement.

Section 15. Notices. All notices, inquiries, directions, reports or other written communications made or given pursuant to the Trust shall be given to the Grantor, the Trustee or the DEP by written communication as directed to the individuals at the addresses specified below, unless those individuals or their successors give notice of a change of address to the other parties in writing. If the Grantor shall cease to exist, all notices, reports or other written communications shall be discontinued to Grantor. All notices, inquiries, directions, reports or other written communication shall be considered effective upon receipt, unless otherwise provided:

Grantor: [Name and address]

Trustee: [Name and address]

DEP: [Name and address]

Section 16. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and DEP, or by the Trustee and DEP if the Grantor ceases to exist.

Section 17. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 15, this trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and DEP, or by the Trustee and DEP if the Grantor ceases to exist. Upon termination of the trust, all remaining trust Property, less final trust administration expenses, shall be delivered to the DEP.

Section 18. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this trust, or in carrying out any directions by the Grantor or DEP issued in accordance with this Agreement. The Trustee shall not be responsible for the enforcement or policing of any environmental action nor be required to defend any claims relating thereto.

The Trustee is a “fiduciary” and its activities herein shall not be construed as an acceptance of environmental liability or being deemed a “responsible party” or “potentially responsible party” under any federal or state laws, including but not limited to: *[federal and state environmental law citations; purpose: to avoid retroactive, joint and several liability when providing VLSP trust services.]* (collectively, “Environmental Acts”). The Trustee, who is acting as a fiduciary pursuant to this Agreement, shall not be liable in its personal or individual capacity under the Environmental Acts or common law equivalents to the DEP or to any other person by virtue of the fact that the Trustee provides or provided such services hereunder unless: (1) during the time when such services were actively provided, an event occurred which constituted a release of regulated substances according to the Environmental Acts at the time of such event; (2) the Trustee had the express power and authority to control property which *was* the cause of such release as part of actively providing the services herein; and (3) the release was caused by an act or omission which constituted gross negligence or willful misconduct of the Trustee according to the law or standard practices at the time of the release.

The Trustee shall be indemnified and saved harmless by the Grantor or from the trust fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense. The provisions of this section shall also extend to the employees and agents of the Trustee.

Section 19. Dispute Resolution. *[TBD as we move forward with our discussions]*

Section 20. Choice of Law. This Agreement shall be administered, construed, and enforced according to the laws of the State of West Virginia.

Section 21. Interpretation and Severability. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

If any part of this Agreement is invalid, it shall not affect the remaining provisions which will remain valid and enforceable.

It is the intention of the parties hereto that this Trust remain in existence until terminated in accordance with Section 17 hereof and that the Trust be exempt from the application of any rule against perpetuities by reason of the DEP's beneficial interest herein, and because the Trust is for the public purpose of assuring funds will be available in the future to ensure that the IECs in the IECIP will be maintained and operated at the Site to protect the environment and the health and welfare of the public. However, in the event that it is ever finally determined by a court with jurisdiction in the matter, that the Trust is subject to any such rule, then the Trust shall terminate twenty-one (21) years less one (1) day, after the death of the last descendent of Ambassador Joseph P. Kennedy living on the date of this Trust Agreement, and the Trust Fund shall be distributed to the DEP, less final trust administration expenses of the Trustee.

IN WITNESS WHEREOF the parties have caused this Agreement to be executed by the respective officers duly authorized and the corporate seals to be hereunto affixed and attested as of the date first written above.

*[Insert name of the Grantor (Grantor)]*  
*[Signature of representative of the Grantor]*  
*[Title]*

ATTEST:  
*[Title]*  
*[Seal]*

*[Insert name and address of the Trustee]*  
*[Signature of representative of the Trustee]*  
*[Title]*

ATTEST:  
*[Title]*  
*[Seal]*

*[Insert name and address of the DEP]*  
*[Signature of representative of the DEP]*  
*[Title]*

ATTEST:  
*[Title]*  
*[Seal]*

## **Model Trust Agreement Schedules**

### **Schedule A**

#### **West Virginia Voluntary Land Stewardship Program**

#### **Cost Estimates for WV VLSP Participation and Identification of IECIP Required Activities**

This Schedule lists the IEC Activities that the WV VLSP will perform for the Site at [address] under the WV Voluntary Remediation Program. The Remediation Party, the WV DEP and the WV VLSP Trustee have identified the following required activities that will be performed by the Trustee pursuant to the IECIP with associated cost estimates:

*[Insert list of required activities that the Trustee will perform along with frequency, duration etc. with associated costs]*

The cost estimates listed here were reviewed and approved by WV DEP on *[insert date]*.

Payments made to the Trustee for the Fund shall consist of cash, securities, or other liquid assets acceptable to the Trustee (collectively, the “Property”). The Fund is established initially as consisting of the Property, which is acceptable to the Trustee as follows:

DOLLAR AMOUNT \_\_\_\_\_  
AS EVIDENCED BY \_\_\_\_\_

### **Schedule B**

#### **WV VLSP Trustee’s Fees**

Trustee’s fees shall be: *[terms of arrangement]*.

## **Model Trust Agreement Exhibits**

### **Exhibit A**

#### **The VRRRA Program Application**

### **Exhibit B**

#### **The Voluntary Remediation Agreement**

### **Exhibit C**

#### **The Final Report and Residual Risk Assessment**

### **Exhibit D**

#### **A Legal Description of Area or Site**

### **Exhibit E**

#### **A Description of the Contaminants for which Applicable Standards are Met**

## Exhibit F

### Model Specimen Institutional and Engineering Control Implementation Plan (IECIP)

#### INSTITUTIONAL AND ENGINEERING CONTROL IMPLEMENTATION PLAN

**DATE:** June 24, 2009

**SITE:** Former Smith Glass Manufacturing

**CONTAMINANTS:** VOCs in groundwater

**CONTROL:** Prohibit Residential Use; Prohibit Groundwater Use

This Institutional and Engineering Control Implementation Plan (“IECIP”) has been prepared to inform current and potential future users of the Former Smith Glass Manufacturing Site (the “Site”) about the institutional controls and engineering controls (collectively, “IECs”) that have been implemented at the Site. The Site was remediated under the West Virginia Voluntary Remediation and Redevelopment Act, WV Code § 22-22-1 through § 22-22-21 (“VRRRA”), which establishes the State’s voluntary cleanup and brownfields programs, as well as long-term stewardship authority (“Voluntary Cleanup Program”). As part of the Voluntary Cleanup Program, IECs may be established in order to protect the remedy that was selected and implemented at the Site. For this Site, IECs will include: \_\_\_\_\_.

1. **Site Description:** [Sample: former glass manufacturing plant consisting of 3 concrete and steel buildings with concrete pads, asphalt parking lots on approximately 18 acres.]
2. **Site Location:** [Address and other identification, including map]
3. **Voluntary Remediation Agreement:** [Sample: The use of the IECs has been approved in the Voluntary Remediation Agreement dated \_\_\_\_\_ by the West Virginia Department of Environmental Protection. *Describe remedy implemented at Site.*]

**4. IEC Objective(s):**

The specific IEC objectives for this Site include:

[Sample:

- a. Prohibit the use of the Site for residential purposes, as identified by the Voluntary Remediation Act (WV Code 22-22-1 et. seq)
- b. Prohibit the installation or use of water wells or other devices for the purpose of withdrawing groundwater from beneath the Site, except as necessary to obtain samples of groundwater for purposes of environmental monitoring]



**2. IEC(s) Implemented to Achieve Objective(s):**

[Sample: A Description of the Institutional and Engineering Controls (collectively, IECs) is attached as Exhibit \_\_ and is included with the Certificate of Completion issued for the Site.]

**3. Environmental Covenant Agreement:** An Environmental Covenant was filed with the Clerk of the \_\_\_\_\_ County Commission for the purpose of protecting public health and the environment and to prevent interference with the performance, operation and maintenance of any remedial actions required by the Voluntary Remediation Agreement. A copy of this Environmental Covenant is available [hyperlink]. Pursuant thereto, the Owner of the Site has certain obligations as reflected therein.

**4. Voluntary Land Stewardship Program:** In addition to the protections contained in the Environmental Covenant, the Site is enrolled in the West Virginia Voluntary Land Stewardship Program (“VLSP”) in order to provide monitoring and oversight of the IECs. The VLSP will provide the following activities or services that are required by the WV DEP to be performed by the VLSP under the Voluntary Remediation Agreement:

[Samples:

1. Monitoring -- Quarterly inspections to monitor that IECs specified herein are in place and operating. The inspection will verify that no residential use is occurring.
2. Reporting -- Annual reports will be prepared for submittal to WVDEP and [Grantor, others] concerning the required activities at Site.]

**5. Other Pertinent Information:** [Environmental registry website etc.]

**6. Contact Information:** For additional information about the completed remediation and IECs associated with this Site, please contact the following representatives:

**West Virginia Voluntary Land Trust Program**  
[contact information]

**West Virginia Department of Environmental Protection**  
Project Manager  
[contact information]

## **Exhibit G**

Recorded Environmental Covenant for Site